

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Shigetaka KINME et al.

Application No.: 10/800,082

Confirmation No.: 8676

Filed: March 8, 2004

Art Unit: 3679

For: COUPLING STRUCTURE OF SHAFT BODY
AND SHAFT JOINT

Examiner: E. Garcia

APPLICANTS' STATEMENT OF SUBSTANCE WITH REGARD TO EXAMINER
INTERVIEW OF FEBRUARY 15, 2008

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In follow-up to An Examiner's Interview Summary mailed on February 22, 2008. Applicants hereby provide a Statement of Substance as to a telephonic interview held between Applicants' representative and Examiner Ernesto Garcia on February 15, 2007.

In the interview of February 15, Applicants presented and discussed a draft Response to a non-final Office Action of October 26, 2007, including proposed amendments to claims 1, 7, 9, 10 and 11, and associated arguments for overcoming a claim objection and claim rejections under 35 U.S.C. § 112, second paragraph and under 35 U.S.C. § 102(b). Applicants also presented and described support in the specification for overcoming an objection to the specification.

With respect to the claims, Applicants amended the claims in support of making the following arguments for distinguishing over U.S. Patent No. 6,474,898 to Aota et al. and U.S. Patent No. 5,647,686 to Hancock et al.

Aota discloses a coupling structure having a shaft body 5, a shaft joint 1 and flexible members 10, 11 for respectively engaging upper taper surfaces 12, 13 to regulate a vertical positioning of the shaft body 5 within an engagement groove of the shaft joint 1 (see, e.g., FIG. 3 of Aota, as reproduced below). In comparison to Applicants' coupling structure as claimed in amended independent claim 1, Aota's flexible members 10, 11 are not engaged with a positioning recess, but rather with taper surfaces 12, 13, which extend upwardly with no apparent concavity to define a top surface of the shaft body 5. No recesses are required in taper surfaces 12, 13, as flexible members 10, 11 extend over taper surfaces 12, 13 to restrict vertical movement of the shaft body 5 within shaft joint 1. Unlike Applicant's claimed coupling structure, Aota's flexible members 10, 11 are not configured to regulate movement of the shaft body 5 in a longitudinal direction.

As can be seen with reference to Aota's FIG. 3, when the shaft body 5 is fully inserted in shaft joint 1, flexible members 10, 11 extend over taper surfaces 12, 13 to restrain vertical movement of the shaft body 5. In this position, and in sharp contrast to Applicants' claimed coupling structure, flexible members 10, 11 extend in an engagement direction that is substantially perpendicular rather than parallel to the taper surfaces 12, 13.

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Hancock discloses a shaft coupling including a shaft body 1, a shaft joint 3, a flexible member 9 within the shaft joint 3), and a coupling shaft 4 (see, e.g., FIG. 6 of Hancock, as reproduced below). In sharp contrast to Applicants' invention as claimed in amended independent claim 9, Hancock's flexible member 9 does not extend externally from an engagement groove along a longitudinal direction of the shaft joint 3, but is rather confined internally within the shaft joint 3 along its longitudinal direction. Moreover, Hancock groove 2 (which may be compared to Applicants' claimed positioning recess) is not substantially parallel to an engagement direction of the flexible member 9. Rather, groove 2 extends around the shaft body 1 in a direction that is orthogonal to a longitudinal direction of the shaft body, while, flexible member 9 has a barbed end 9A, which engages the groove 2 and extends substantially along the longitudinal direction of the shaft body 1.


Examiner Garcia suggested that the features relating to the extension of Applicants flexible member externally from the engagement groove may distinguish over the currently-cited art, and made some very helpful suggestions for further clarifying the nature of these differences in the claim amendments. Applicants revised their amendments and arguments, and filed a Response to Office Action on February 25, 2007.

In view of the foregoing, it is believed that pending claims 1-7 and 9- 11 are in condition for allowance and it is respectfully requested that the pending claims be allowed and the case passed to issue.

Dated: March 24, 2008

Respectfully submitted,

By


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